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10/807,075	03/23/2004	Michael J. Azevedo	SJO920030061US1	2651

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EXAMINER

PUENTE, EMERSON C

ART UNIT	PAPER NUMBER
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2113

MAIL DATE	DELIVERY MODE
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08/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

This action is made **Final**.

Claims 53 and 57-59 have been examined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 53 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,345,392 of Mito et al. referred hereinafter Mito in view of US Patent No. 6,543,002 of Kahle et al. referred hereinafter "Kahle".

In regards to claim 53, Mito discloses a method for determining when to perform an error recovery instruction, comprising:

receiving an error recovery instruction. Mito discloses receiving an interrupt (see figure 4 and column 8 lines 36-37).

monitoring a processor interface for an idle condition. Mito discloses checking if I/O is active (see figure 4 item 192 and column 8 lines 40-45).

withholding access to a local processor and performing the error recovery instruction in response to detecting an idle condition in said processor interface. Mito

discloses initiating a suspend routine in response to determining an idle condition for a predetermined amount of time (see column 8 lines 45-47).

However, Mito fails to disclose:

beginning a timeout task, and forcing performance of the error recovery instruction before an idle condition in said processor interface is detected when the timeout task expires.

Kahle disclose a hang detection unit for recovering from a hang condition via a hang recovery sequence. Kahle further discloses a hang condition is determined when the maximum number of clock cycles since the most recent assertion of completion valid signal is exceeded (see column 6 lines 40-45), indicating a timeout task.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Mito and Kahle to have a hang detection unit for recovering from a hang condition via a hang recovery sequence, wherein a hang condition is determined when the maximum number of clock cycles since the most recent assertion of completion valid signal is exceeded, thus indicating beginning a timeout task, and forcing performance of the error recovery instruction before an idle condition in said processor interface is detected when the timeout task expires. A person of ordinary skill in the art could have been motivated to combine the teachings because Mito is concerned with shutting down a system when there is a problem (see column 1 lines 23-25), and incorporating a hang detection unit, as per teachings of Kahle, enables shutting down a system when the problem is a hang condition (see column 6 lines 40-45).

In regards to claim 59, Mito in view of Kahle discloses the claim limitations as discussed above. Mito further discloses resuming normal operations after performing the error recovery instruction. Mito discloses a resume handler (see figure 7 and column 9 lines 15-27).

Response to Arguments

Applicant's arguments filed May 16, 2008 have been fully considered but they are not persuasive.

In response to applicant's argument, "It is respectfully submitted that Examiner's proposed modification of the Mito reference would directly contradict the teachings of Mito reference and therefore clearly not be obvious to one of ordinary skill.....Thus instead of forcing the suspend operation if the I/O device remain active as suggested by the Examiner, it is clear that the suspend timeout is intended to continue to be reset such that the suspend operation is intended not to be performed if the I/O devices remain active," (see page 5 of Remarks) examiner respectfully disagrees.

Examiner notes not in all cases is I/O required to be inactive to start suspension. In view of figure 4, when the error is beyond temperatures or lower battery, the suspend routine is started without requiring the I/O to be inactive. As such, applicant's assertion that that the suspend operation is intended not to be performed if the I/O devices remain active is not valid in all cases.

Mito is concerned with detecting various types of errors in a system, such as watchdog timeout, etc (see figure 4 and column 8 lines 25-30). Furthermore, Kahle

Art Unit: 2113

discloses detecting another known type of error, a hang condition, by determining when the maximum number of clock cycles since the most recent assertion of completion valid signal is exceeded (see column 6 lines 40-45), indicating a timeout task. The proposed combination would not contradict Mito because Mito is concerned with detecting various types of errors in a system and a hang condition, constitutes a type of error known to be detected in a system. Adding a hang detection unit of Kahle would by no means limit or contradict the teachings of Mito. Rather, it would make the system of Mito better because as it would enable it to detect another type of error, a hang condition. Argument is moot. Examiner maintains his rejection.

Applicant's arguments with respect to the rejection Hanrahan in view of Kahle (see page 6-7 of Remarks) have been fully considered and are persuasive. The rejection has been withdrawn.

Allowable Subject Matter

Claims 57 and 58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C. Puente whose telephone number is 571-272-3652. The examiner can normally be reached on 9-6 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on 571-272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2113

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/Emerson C Puente/
Primary Examiner, Art Unit 2113